The Assistive Technology Clinical Rehab Engineering Team at the Richmond VAMC have started to offer “Smartphone School” via telehealth to Veterans in Fayetteville NC.

Clinical Psychologist, Jennifer Lundmark, out of Fayetteville NC VAMC reached out to the Richmond TREWI team seeking help in offering Veterans assistance with their smartphones. Dr. Lundmark has worked at Walter Reed Medical Center where she collaborated with their Assistive Technology Program to develop a smartphone class for both Android and iOS users. Based on her experience, she wanted to offer the same in Fayetteville just through a different medium – Tele-Rehabilitation technology. Dr. Lundmark identified a need for the class after recommending various cognitive strategies to assist Veterans with memory function, such as, reminder apps, calendar apps and visual to-do list apps. She found a large percentage of Veterans were in need of training on how to use the various functions of their smartphones. We all agreed, if Veterans were more comfortable operating their smartphones, they would be more likely to utilize the cognitive strategies recommended by their providers.

Rehab engineers, Seth Hills and John Miller, revisited the curriculum from Walter Reed’s in person smartphone school for both iOS and Android users. The 1 hour class is set up to teach iOS users the 1st and 3rd Tuesdays of the month and Android users the 2nd and 4th Tuesdays of the month. Curriculum includes information on accessing and changing basic smartphone settings, special features and shortcuts, various calendar, map, and note-taking apps, phone and data security, and the cloud.

Veterans have given both positive and constructive feedback and are pleased with having access to additional resources and the chance to learn how to use their phones as a tool. We are looking forward to growing this unique opportunity for Veterans both at the Richmond VAMC and other VA Medical Centers across the nation.

When: 1st Friday of the month
Time: 1pm EST
Continuing Education is offered for AOTA and ASHA.
Registration is always through TMS.

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Assistive Technology
Smartphone School via TeleHealth
A Paragolfer is a mix between a power wheelchair and a golf cart. It is meant to go on the greens of the golf course without doing any damage to the course. Golf carts cannot go on the putting green and so any adaptive devices, you can’t putt from. It is very important that it doesn’t do any damage to the green, so it is specifically meant for that. It can used for anything outdoors or anything that would benefit from standing. It has the capability to stand and the individual would control it like a wheelchair. The individual will get a full golf swing out of this. There is other adaptive equipment that involves sitting, but this is the only standing one of its kind. There are three points of connection, standing on a plate, a knee guard, a waist belt, and a chest strap. If you use the chest strap as support you don’t get a full swing. It goes up and down hills as well as rough terrain. It has a safety feature that if the hill is too steep it beeps too let you know it’s too steep and it beeps quickly if it is too steep and it will shuts off and slowly roll back so you don’t go too fast. If you go backwards up a hill it will turn you around so you are going safely.

Anyone that needs assistance with standing would benefit from the paragolfer for example, spinal cord injuries or amputees, anyone with any paralysis or balance issues. According to Nicole Shuman, Adaptive Sports specialist, there have been a couple people with brain injuries and Parkinson’s with balance issues who have used the paragolfer. It provides stability and comfort in the device and can focus on hitting instead of keeping balance and working their core. It was developed with spinal cord injuries in mind.

Ms. Shuman states, “plan on using it for all of our outdoor activities. So golf, archery, fishing, photography, and disc golf because it is all terrain. That is one side of it is getting around places but also the standing capabilities. It is quite wide so it is harder to use indoors and it does better with rougher terrains, so it does better on the grass than the pavement. On flatter surfaces it gets a little sensitive. And the health benefits to standing, getting blood flow and weight onto your bones is beneficial.”

The VA will not be buying it for individual veterans as the Paragolfer is considered a golf cart which is a vehicle and the VA is not allowed to purchase vehicles. That is being worked on trying to change the definition to a wheelchair but not at this time. They cost $30,000. There is an organization called Stand Up and Play, the developer has them available around the country. Individuals interested can look up the nearest one in their location and go to rent it. Richmond is fortunate enough to have three in the area.

According to Ms. Shuman, “It is a pretty neat device. It will be kept here on property and available for veteran use at all times for whatever activity, not necessarily golf. It is a really neat experience for people to go outside and do things in a standing position and feel comfortable. It is the only one that stands, drives, and is safe for the grounds of a golf course.”
Mark Reddington is a 42 year old veteran who served in the Navy where he worked on a submarine as the “torpedo man.” He was involved in an ATV rollover accident in 1998 resulting in a spinal cord injury (C4 AIS-A).

Mr. Reddington was referred to the McGuire VA Medical Center’s assistive technology program from the Martinsburg VA. He was seen through telerhabilitation services for the initial evaluation.

Tell us about your experience with the Assistive Technology Program (Speech, driving rehab, OT/PT/RT).

So far it has been great I haven’t been able to use a cell phone up until now, so it has been really good. The telehealth has really helped out too so cause a lot of time dealing with a pressure sore I don’t get in a chair as much as I would like to. So the telehealth helped out a lot being able to train on that while being in bed.

What challenges were you having that had you referred to the program?

The main reason I wanted a cell phone to begin with was to get this equipment for my wheelchair, the recreational equipment. And I needed a cell phone in order to use it. It is a shooting system so I can go hunting this year. The cell phone works that you mount it to your scope on a rifle and in order for me to look down the scope I would have to get my eye right down to it. With the cell phone it looks right down the scope so I have a big screen and I can see what the scope sees. So that was a reason to go through all this so I could get the shooting system. It also has a trigger system with a joystick to move up, down, left, and right and has a sipping straw with an actuator on it that pulls the trigger.

Who did you see?

Brian Burkhardt

What device/program did you get?

The sesame enable

How has the device changed your life or impacted your life?

It opened up a lot of opportunities. Before, I never worried about having a cell phone before because someone always had one, so this way I am a little more independent. I don’t have to rely on someone else. So that alone is enough, the more independence is ideal.

What activities (things) are you doing now that you were not able to do before?

With a cell phone I was not able to take pictures, getting on Facebook, going for hospital visits it’s good to have something to pass the time other than just waiting for the doctor to call us back.

Would you say your quality of life has improved?

Yea, I really enjoy it. It’s good to know I have a cell phone and I can do emails from the phone.

Is there anything we have not covered that you would like to include?

Not right now, but if anything comes up I’ll reach out.
Nuts and Bolts...Where to put it all...a quick guide to mounting

John Miller, AT Rehab Engineering

For many veterans that rely on AT services, mounting the devices they use for computer access, phone access, communication, environmental control, or other technology is crucial. While it might seem like a pesky detail, good mounting can make it easier for caregivers to set up a device and for veterans to access the device. Without it, devices can go unused, failing to benefit a veteran’s life as intended. AT relies on several mounting companies to get things mounted appropriately.

RAM Mounts is frequently used for holding personal devices where the veteran needs to access his/her smartphone or tablet device while in a wheelchair, scooter, or in bed. RAM Mounts offer many different components so that one can assemble the best solution, whether that’s a circular clamp for attaching to tubes, a suction cup for attaching to flat surfaces, or an extra-long arm for closer access. Having a complete stock of RAM Mount components is very helpful when workshopping a mounting solution.

Another versatile mounting solution is LocLine, a series of small hose parts that can snap together to create mounting arms as long or short as you wish. LocLine offers various clamps, trays, discs, and device holders to be attached to LocLine hose. This solution is great for mounting switches, lightweight tablets, smartphones, and even long drinking straws. The hose can be easily bent and reconfigured to position the device as needed. While it can be used in a wheelchair or scooter, it tends to use it regularly for bedside mounting too.

Mount ‘n Mover is a heavy duty mounting solution, handy for smartphones and tablets but also for laptop computers if necessary. The company offers many different components so that their products can be easily mounted onto a power wheelchair for daily access or used on a table. They also have nice adjustability that can be set up with memory locks so that a mount can go between several different locked positions consistently, which especially eases the burden on caregivers when the veteran requires very precise mounting. The laptop tray is one frequently used, which can help veterans access a laptop while lying flat in bed.

One more mounting solution we rely upon is REHadapt. This company makes aluminum tubes, clamps, floor stands, and mounting brackets that are very durable and strong. If a veteran needs access to a heavy communication device (10lbs) while in his/her power wheelchair, REHadapt has components that can hold it reliably. Their components can be easily adjusted but also quickly locked down. REHadapt’s floor stands are also excellent for mounting communication devices or computers and can be rolled around for use while in a wheelchair or in bed.

Sometimes the AT Rehab Engineering Team get to be creative when mounting things effectively, combining products or 3D printing components. Without these companies and their products, however, it would be a struggle to deliver optimal AT services to our veterans who rely on AT to go about their daily lives.

Assistive Technology Program Mission

- To enhance the ability of Veterans and Active Duty members with disabilities to fulfill life goals through the coordination and provision of appropriate interdisciplinary assistive technology services.
- To serve as an expert resource to support the application of assistive technology within the VA health care system.